



# Systems Intelligence

## an outline

Meeting at the Center for Research on Environmental Decisions  
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## Systems Intelligence Research Group

- Professor Raimo P. Hämäläinen, co-director
  - Decision analysis, game theory, systems analysis
  
- Professor Esa Saarinen, co-director
  - Applied philosophy and systems sciences
  - Philosopher, well-known lecturer in Finland, consultant to e.g. Nokia, Marimekko, Kone Corporation
  
- Research personnel
  - Leppänen, Ilkka
  - Lievonen, Petri
  - Luoma, Jukka
  - Marttunen, Mika
  - Slotte, Sebastian



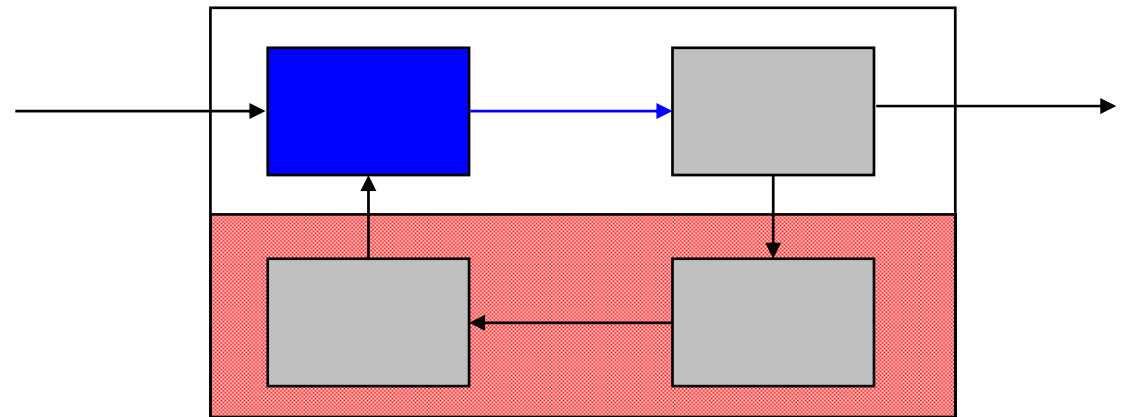
## A definition Systems Intelligence

- Intelligent behaviour in the context of complex systems involving interaction, dynamics and feedback
- A subject acting with Systems Intelligence engages successfully and productively with the holistic feedback mechanisms of her environment
- She perceives herself as part of a whole, the influence of the whole upon herself as well as her own influence upon the whole
- By observing her own interdependence in the feedback intensive environment, she is able to act intelligently



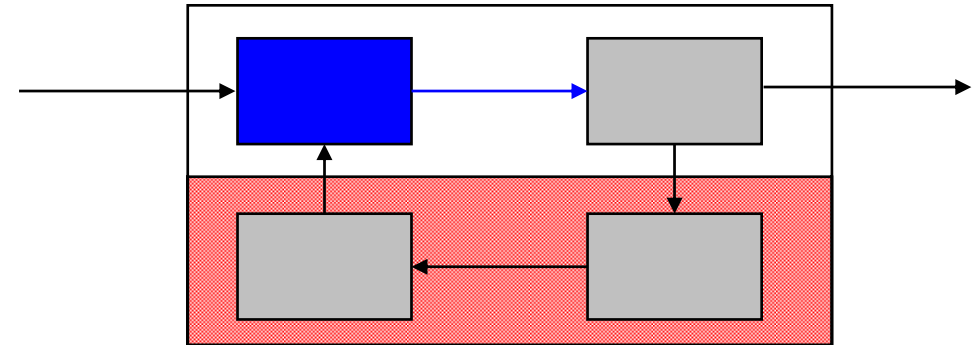
## Building upon notions of Systems Thinking such as

- "Parts" and "wholes"
- Cumulative effect
- Feedback
- Effects with delay
- Complexity
- Emergence



## On the "system" of Systems Intelligence

- An interconnected whole of human agents
  - E.g. situation, meeting, family, group, organization, institution
  - A construct and, thus, relative to the viewpoint adopted
- Systems have generative power
  - Restricts, conditions, encourages, suggests, seduces and commands
  - Thoughts, actions, behaviors, experiences, understanding, framings
  - *Seems* to have a will of its own
- Framing **oneself as a part of the system**, *constantly* influencing upon and influenced by the system





## Systems Intelligence as "positive" Systems Thinking

- There is a bias towards positivity in Systems Intelligence (cf. Positive Psychology, Positive Organizational Scholarship)
- Focusing also upon what we *are already doing right and could do better* as a part of our everyday participation in systems
- Systems Intelligence calls for
  - Interventions and re-framings **from within** systems
- Knowing how as opposed to merely knowing that
  - Intelligence as "embedded-in-action"



## Topics discussed in the ICCS 2007 meeting

Luoma, J., Hämäläinen, R. P., and Saarinen, E. (2007) Coping with complexity: Systems thinking, complex responsive processes, and systems intelligence, *Manuscript 2007-10-05*

- Complex Responsive Processes (Stacey et al., 2000) as a perspective implying a focus on *what people are already doing*
  - An alternative to "Systems Thinking"?
  - A description of organizations as interrelated interactive processes between people, drawing from e.g. George H. Mead's *Mind, Self, and Society* (1934)
  
- Systems Intelligence as a systems approach that acknowledges the pitfalls of an "objectifying systems discourse"



## Topics discussed in the ICCS 2007 meeting

Leppänen, I., Hämäläinen, R. P., and Saarinen, E. (2007) Intentions and systems intelligence: Prospects for complexity research, *Manuscript 2007-09-28*

- Traditional methods to describe emergence of cooperation lack considerations of intentionality
- Intention signaling and reading capabilities as innate human systems endowments





## Systems Intelligence – some key concepts

- Systems of Holding Back in Return and in Advance
- Need to act
- Agency
- "Living present"
- Systemic intervention
- Microbehaviors
- "Butterfly effects"
- Human potential
- Optimism for change



## References

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